CLAIMS

1. A generator controller responsive to at least one voltage sensor for measuring a generator output voltage of a controlled generator controlled by the generator controller, wherein the generator controller is responsive to at least one current measuring device for measuring a generator output current, and wherein the generator controller is arranged to shut down the controlled generator if the measured generator output voltage is less than a first voltage threshold and the measured generator output current is less than a current threshold.

2. A generator controller as claimed in claim 1, wherein the generator controller is arranged to signal the occurrence of a generator overload and/or invoke overload protection measures if the measured output voltage is less than the first voltage threshold and the measured current is greater than the current threshold.

3. A generator controller as claimed in claim 1 or 2, wherein the controller is responsive to a plurality of voltage sensors for measuring a plurality of phases of a multiphase generator and to compare the largest voltage with the first voltage threshold.

4. A generator controller as claimed in claim 1, wherein during a generator start-up phase the operation of the generator controller is modified such that during a first time period the generator controller is not responsive to the measured generator output voltage.

5. A generator controller as claimed in claim 4, wherein the measured generator output voltage is compared with a second voltage threshold following the end of the first time period and the at least one voltage sensor is assumed to be functioning correctly if the measured output voltage is greater than the second voltage threshold.

6. A generator controller as claimed in claim 5, wherein once the generator controller has determined that the at least one voltage sensor is functioning correctly the controller waits for a further time period before invoking sensor failure protection wherein the generator controller deduces that a fault has occurred in at least one

voltage sensor by virtue of the measured generator output voltage being less than the first voltage threshold and the measured generator current being less than the current threshold.

7. A generator control system, comprising a generator controller as claimed in claim 1 in combination with at least one voltage sensor and at least one current measuring device.

8. A generator in combination with a generator control system as claimed in claim 7.

9. A generator controller arranged to detect failure of a first voltage sensor provided for measuring an output voltage of a generator, wherein the generator controller is responsive to a current sensor provided for measuring an output current of the generator and the generator controller detects that the first voltage sensor is not functioning correctly when the measured generator output voltage is less than a first voltage threshold and the measured output current is less than a current threshold.

10. A method of detecting voltage sensor failure of a generator control system having a first voltage sensor for measuring an output voltage of a generator, characterised by the steps of measuring an output current of the generator and determining the first voltage sensor to have failed if, during operation of the generator, the measured output voltage of the generator is less than a first voltage threshold and the measured generator output current is less than a current threshold.

11. A method as claimed in claim 10, in which the first voltage threshold is less than the nominal output voltage of the generator.

12. A method as claimed in claim 10, in which a generator overload condition is determined if, during operation of the generator, the measured output voltage of the generator is less than the first voltage threshold and the measured generator output current is more than the current threshold.

13. A method as claimed in claim 10, in which determination of voltage sensor failure is inhibited or modified during a start up phase of the generator.

14. A method as claimed in claim 13, in which during a generator start up the measured generator output voltage is compared with a second voltage threshold after a first time period has elapsed following initiation of start up and the first voltage sensor is deemed to be functioning correctly is the measured generator output voltage exceeds the second voltage threshold.

15. A method as claimed in claim 14, in which the generator start up phase is deemed to have finished following the end of a further time period.